ORDER NO. KMS0508064SE
F19, F5

Service Manual

2.4GHz Portable Station

KX-TD7680 / KX-TD7680C
(for U.S.A.,Canada)

Please file and use this supplement manual together with the service manual for Model No. KX-TD7680 Order No. KMS0307781C1, Model No. KX-TD7680C Order No. KMS0308806C1.

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1. SUP-2 (KMS0508064SE)

1.1. CHANGES

1.1.1. SUBJECT

Suffix	Reason for suffix change
C to D	Software change (IC801:ROM Ver. U391AB to U391AC), There is no change in the "REPLACEMENT PARTS LIST."
D to E	AC ADAPTOR change due to RoHS-compliance
E to F	PCB change (PSUP1426ZA to PSUP1426ZB)

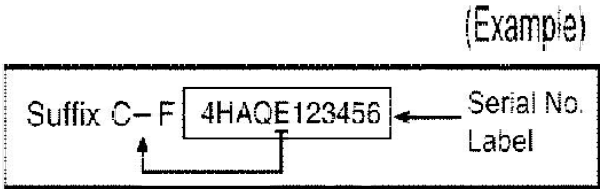
Important Notice (especially in those countries belonging to the European Union):

Some of the new parts introduced by this document are the parts which now comply with the national laws transposed from the EU Directive on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment, effective 1st July 2006 in the EU countries.

In order for the product to comply with the RoHS Directive by 1st July 2006, the components for production are being replaced with those with the six particular substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers) either totally eliminated or limited to the concentration level below maximum allowed. Consequently spare parts have been changed to RoHS-compliant parts where applicable.

To ensure compliance with the spare parts application of the RoHS legislation, please make sure to follow the details provided in this manual in ordering spare parts and carrying out repairs.

1.1.2. SUFFIX LOCATION



1.1.3. REPLACEMENT PARTS LIST

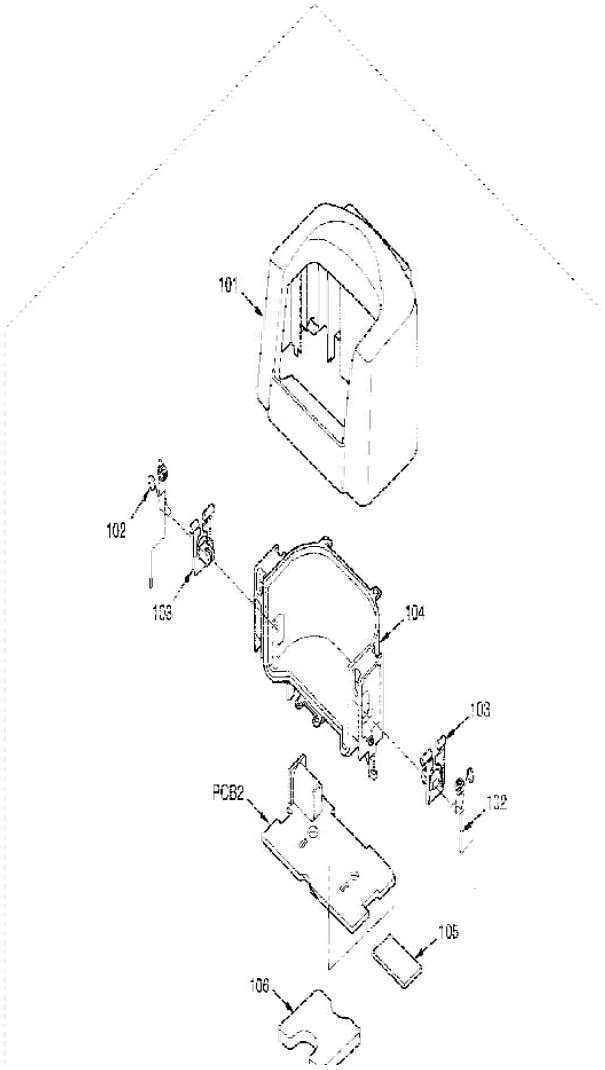
Reason for Change (Symbol:A) Following 1-8 reasons are indicated on the Notes in the bottom column.	
1. Improve performance	Remark
2. Change of material or dimension	1. Mark *1 has been changed at the same time.
3. To meet approved specification	
4. Standardization	
5. Addition	
6. Deletion	
7. Correction	
8. Other	

Interchangeability Code (Symbol:B) Following V-Z interchange abilities are indicated on the Notes in the bottom column.			
	Parts	Set Production	
V	Original New	Early (before change) Late (after change)	Original or new parts may be used in early or late production set Use original parts until exhausted, then stock new parts.
W	Original New	Early (before change) Late (after change)	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.
X	Original New	Early (before change) Late (after change)	New parts only may be used in early or late production sets. Stock new parts.
Y	Original New	Early (before change) Late (after change)	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both origi and new parts.
Z	Other		

Ref. No.	Part No.		Part Name & Description	Pcs	Remarks	Notes		Time c chang (Suffi
	Original (Old)	New						
PS MAIN BOARD PARTS								
IC652	C0EBD0000168	C0EBD0000351	IC	1	*1	8	Y	F
Q300	----------	B1ADGE000004	TRANSISTOR(SI)	1	*1	5		F
Q301	----------	2SC4081R	TRANSISTOR(SI)	1	*1	5		F
Q654	B1GBCFNA0001	2SA1036KQ146	TRANSISTOR(SI)	1	*1	8	Y	F
D650	----------	B0JCDD000002	DIODE(SI)	1	*1	5		F
C654	D0GA391JA004	----------	CAPACITOR, 390pF	0	*1	6		F
C662	ECUE1C104ZFQ	ECUV0J105KBV	CAPACITOR, 1 F	1	*1	8	Y	F
C663	ECUE1C104ZFQ	ECUE1H102KBQ	CAPACITOR, 0.001 F	1	*1	8	Y	F
C862	----------	ECUE1H103ZFQ	CAPACITOR, 0.01 F	1	*1	5		F
C902	ECUV1H104ZFV	----------	CAPACITOR, 0.1 F	0	*1	6		F
C903	ECUV1H102KBV	----------	CAPACITOR, 0.001 F	0	*1	6		F
C904	----------	ECUV1H104ZFV	CAPACITOR, 0.1 F	1	*1	5		F
R300, R442	----------	ERJ2GEJ104	RESISTOR, 100k	2	*1	5		F
R301	----------	ERJ2GEJ472X	RESISTOR, 4.7k	1	*1	5		F
R302	----------	ERJ2GEJ473	RESISTOR, 47k	1	*1	5		F
R313 to R315, R842	----------	ERJ2GEYJ103	RESISTOR, 10k	4	*1	5		F
R655	ERJ2GEJ000	----------	RESISTOR, 0	0	*1	6		F
R656	ERJ2GEYJ181	ERJ2GEJ473	RESISTOR, 47k	1	*1	8	Y	F
R657	----------	ERJ2GEYJ222	RESISTOR, 2.2k	1	*1	5		F
R757	----------	ERJ2GEYJ102	RESISTOR, 1k	1	*1	5		F
R758	ERJ2GEJ104	ERJ2GEYF274	RESISTOR, 270k	1	*1	8	Y	F
R855	ERJ2GEJ104	----------	RESISTOR, 100k	0	*1	6		F
R861	----------	ERJ2GEYF474	RESISTOR, 470k	1	*1	5		F
R862	----------	D1BA3903A015	RESISTOR, 390k	1	*1	5		F

Ref. No.	Part No.		Part Name & Description	Pcs	Remarks	Notes		Time c chang (Suffi
	Original (Old)	New						
E1	WM-53BSU	L0CBAB000052	MICROPHONE	1		1	V	
E6	PQHR10781Z	L0AD01A00011	SPEAKER	1	*R	8	W	
CHARGER CABINET AND ELECTRICAL PARTS								
109	----------	PSLP1243Z	CHARGER	1		5		
CHARGER BOARD PARTS								
PCB2	PSLP1243Z	PSWPTD7680M	CHARGER BOARD ASS'Y (RTL)	1		7		
ACCESSORIES AND PACKING MATERIALS								
A1	KX-TCA1-G	KX-TCA1-2	AC ADAPTOR,	1		8	W	E
A6	PSQX2575X	PSQX2575W	INSTRUCTION BOOK (KX-TD7680 only)	1		8	V	

1.1.4. CHARGER CABINET AND ELECTRICAL PARTS LOCATION



1.2. SCHEMATIC DIAGRAM

1.2.1. MAIN PART

1.2.2. RF PART

1.3. PRINTED CUIRCUIT BOARD

2. SUP-1 (KMS0407871S1)

T.H. / KXTD7680 / KXTD7680C

ORDER NO. KMS0407871S1
F19, F5

Service Manual

2.4GHz Portable Station

Supplement-1

KX-TD7680
KX-TD7680C

(for U.S.A.,Canada)

Please file and use this supplement manual together with the service manual for Model No. KX-TD7680 Order No. KMS0307781C1, Model No. KX-TD7680C Order No. KMS0308806C1.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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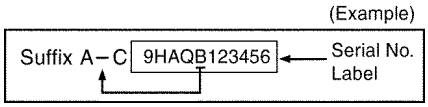
1 CHANGES

1.1. SUBJECT

Suffix	Reason for suffix change
A to B	Software change (IC801:ROM Ver. U391AA to U391AB), There is no change in the “REPLACEMENT PARTS LIST.”
B to C	Change of country origin for battery

1.2. SUFFIX LOCATION

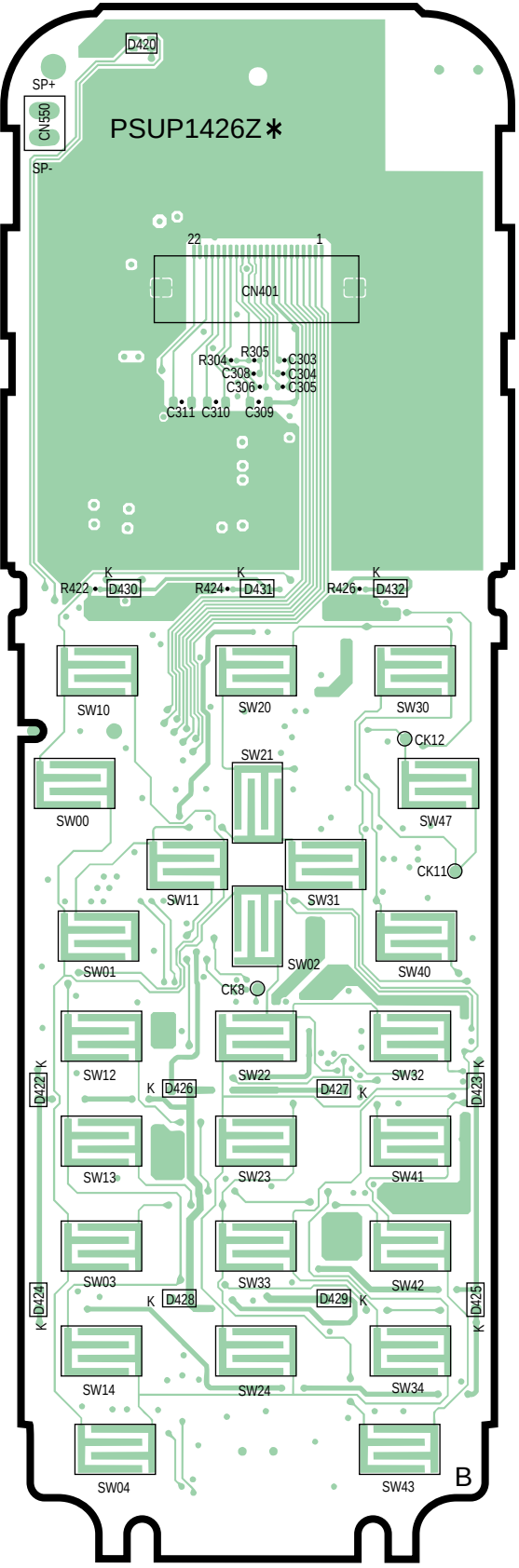


1.3. REPLACEMENT PARTS LIST

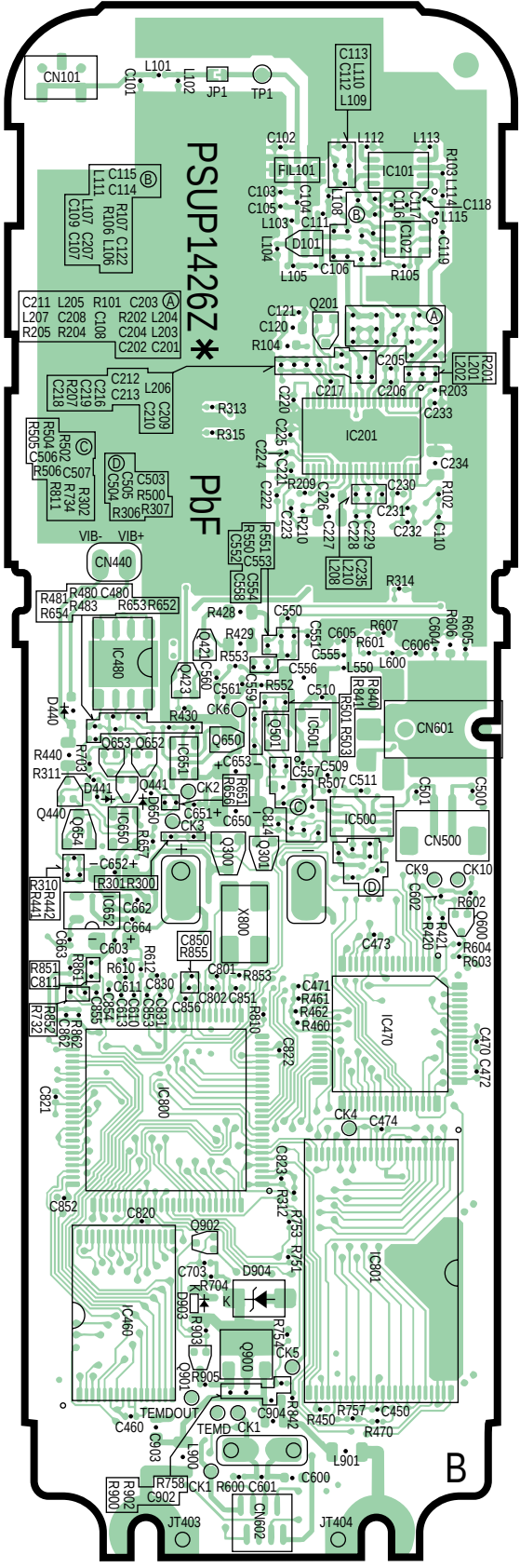
Reason for Change (Symbol:A) Following 1-8 reasons are indicated on the Notes in the bottom column.	
1. Improve performance	Remark 1. Mark *1 has been changed at the same time.
2. Change of material or dimension	
3. To meet approved specification	
4. Standardization	
5. Addition	
6. Deletion	
7. Correction	
8. Other	

Interchangeability Code (Symbol:B) Following V-Z interchange abilities are indicated on the Notes in the bottom column.		
Parts	Set Production	
V Original New	Early (before change) Late (after change)	Original or new parts may be used in early or late production sets. Use original parts until exhausted, then stock new parts.
W Original New	Early (before change) Late (after change)	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.
X Original New	Early (before change) Late (after change)	New parts only may be used in early or late production sets. Stock new parts.
Y Original New	Early (before change) Late (after change)	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
Z Other		

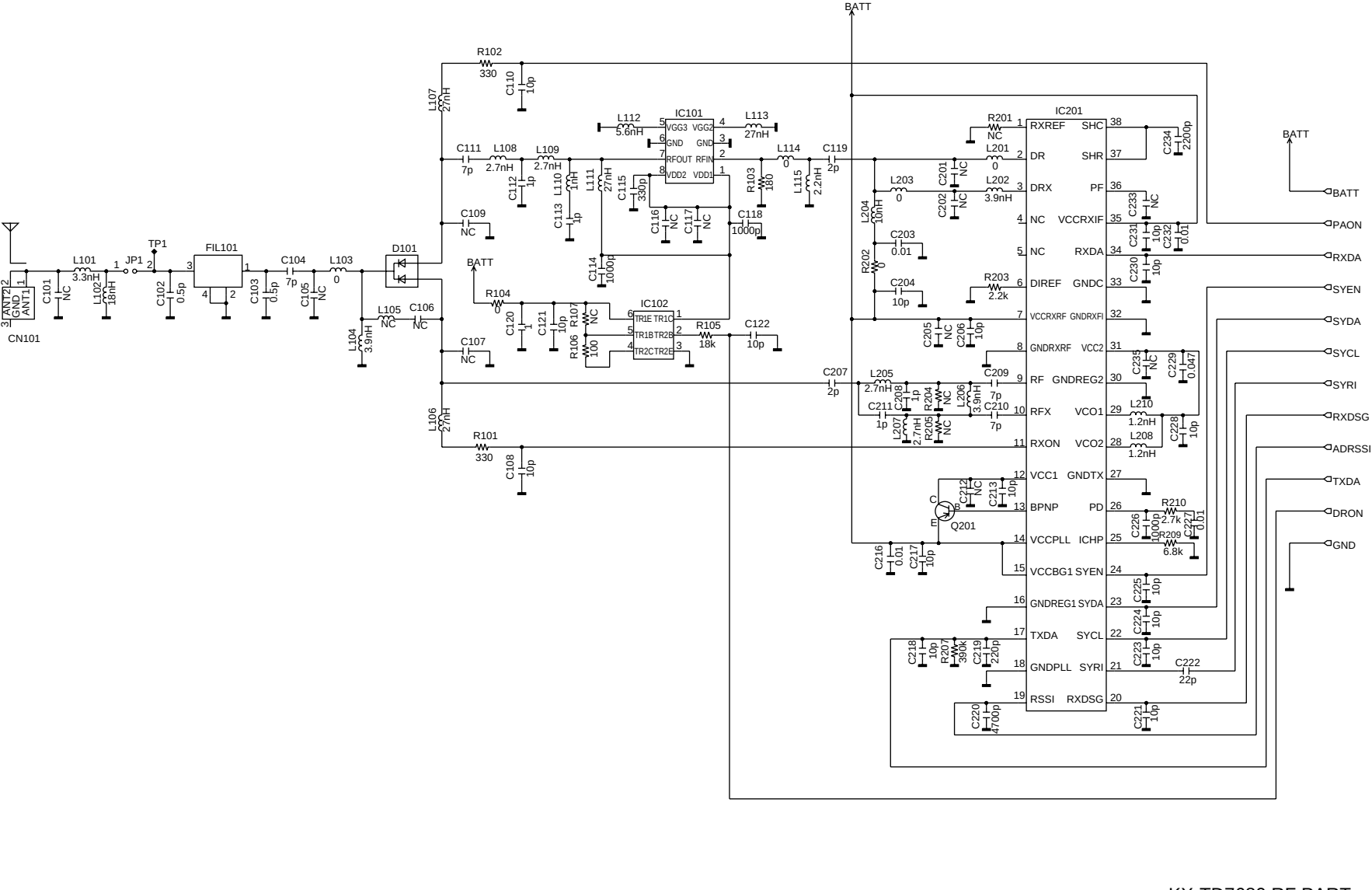
Ref. No.	Part No.		Part Name & Description	Pcs	Remarks	Notes		Time of change (Suffix)
	Original (Old)	**New**						
PS CABINET AND ELECTRICAL PARTS								
28	PSGT2302Z	**PSGT2302Y**	NAME PLATE (FOR PS) (KX-TD7680 only)	1	*1	8	X	C
PS MAIN BOARD PARTS								
C603,C652 C653	ECST0GY226	**ECST0JY226**	CAPACITOR , 22µF	3		1	X	
C650	F3G0J686A001	**F3G1C226A001**	CAPACITOR , 22µF	1		1	X	
ACCESSORIES AND PACKING MATERIALS								
A2	N4HHGMB00001	**N4HHGMB00005**	NI-MH BATTERY	1	*1	8	X	C
A6	PSQX2575Z	**PSQX2575Y**	INSTRUCTION BOOK (KX-TD7680 only)	1	*1	8	X	C
A6	PSQX2575Y	**PSQX2575X**	INSTRUCTION BOOK (KX-TD7680 only)	1		8	X	



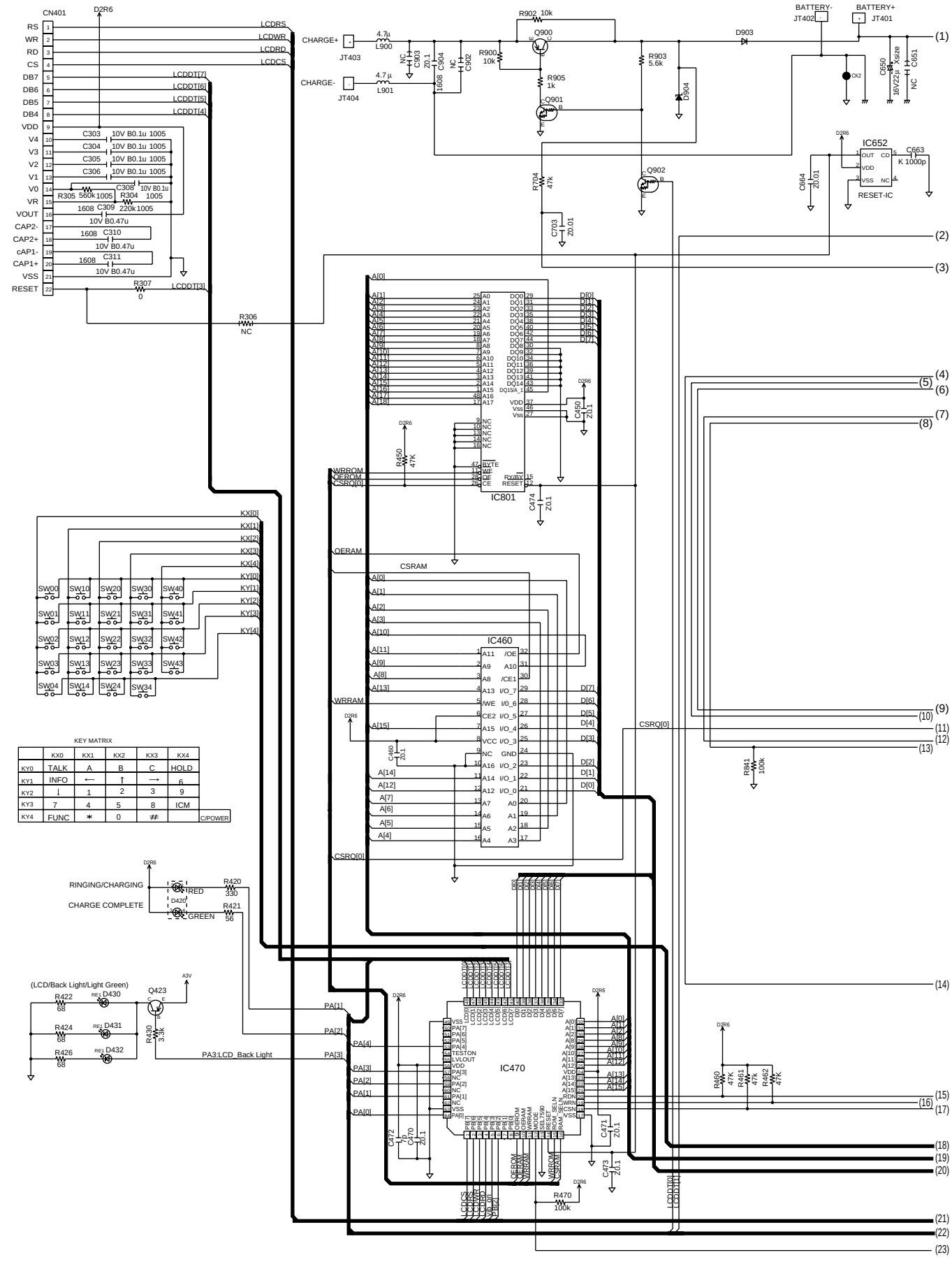
KX-TD7680 COMPONENT VIEW



KX-TD7680 BOTTOM VIEW



KX-TD7680 RF PART


CN401
D2R6
RS
WR
RD
CS
DB7
DB6
DB5
DB4
VDD
V4
V3
V2
V1
V0
VR
VOUT
CAP2-
CAP2+
cAP1-
CAP1+
VSS
RESET
LCDRS
LCDWR
LCDRD
LCDCS
LCDDT[7]
LCDDT[6]
LCDDT[5]
LCDDT[4]
LCDDT[3]
C303 10V B0.1u 1005
C304 10V B0.1u 1005
C305 10V B0.1u 1005
C306 10V B0.1u 1005
C308 10V B0.1u 1005
R305 560k 1005
R304 1005
C309 220k 1005
1608
10V B0.47u
C310
C311
R307 0
R306 NC
CHARGE+
CHARGE-
JT403
JT404
4.7u L900
4.7 u L901
NC C903
Z0.1 C904
NC C902
1608
R902 10k
Q900
R900 10k
R903 5.6k
R905 1k
Q901
D903
D904
BATTERY-
JT402
BATTERY+
JT401
CK2
C650 16V22u
K SIZE
C651 NC
IC652
OUT CD
VDD
VSS NC
C663 K 1000p
C664 Z0.01
RESET-IC
R704 47k
Q902
C703 Z0.01
(1)
(2)
(3)
(4)
(5)
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(23)
A[0]
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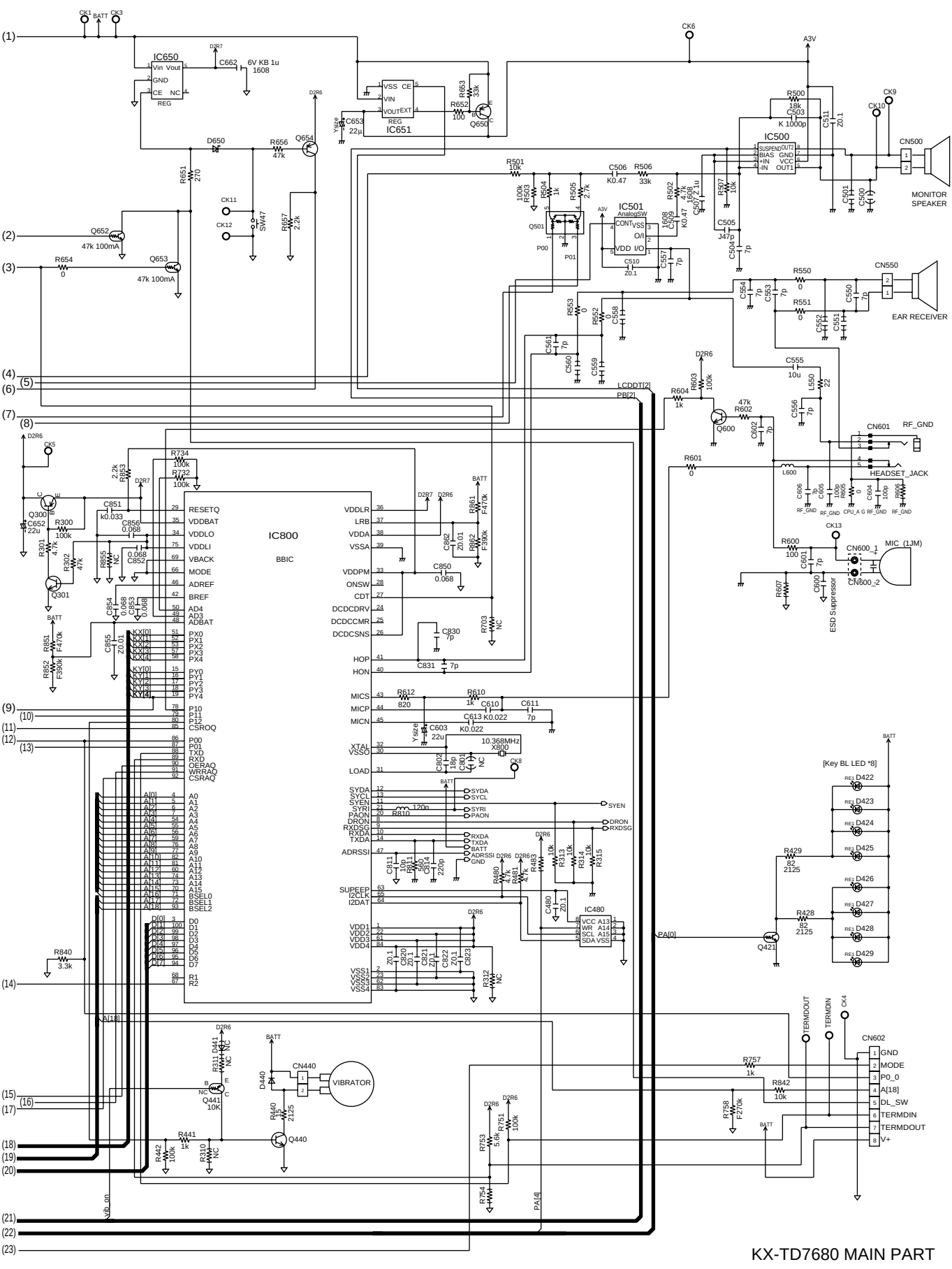
A[17]
A[18]
D[0]
D[1]
D[2]
D[3]
D[4]
D[5]
D[6]
D[7]
IC801
BYTE
WE
CE
RY/BY
RESET
C450 Z0.1
R450 47K
WRROM
OEROM
CSRQ[0]
C474 Z0.1
OERAM
CSRAM
WRRAM
IC460
/OE
/CE1
I/O_7
I/O_6
I/O_5
I/O_4
I/O_3
I/O_2
I/O_1
I/O_0
VCC
GND
C460 Z0.1
R841 100k
KX[0]
KX[1]
KX[2]
KX[3]
KX[4]
KY[0]
KY[1]
KY[2]
KY[3]
KY[4]
SW00 SW10 SW20 SW30 SW40
SW01 SW11 SW21 SW31 SW41
SW02 SW12 SW22 SW32 SW42
SW03 SW13 SW23 SW33 SW43
SW04 SW14 SW24 SW34
KEY MATRIX
KX0 KX1 KX2 KX3 KX4
KY0 TALK A B C HOLD
KY1 INFO ← ↑ → 6
KY2 ↓ 1 2 3 9
KY3 7 4 5 8 ICM
KY4 FUNC * 0 # C/POWER
RINGING/CHARGING
CHARGE COMPLETE
D420
RED
GREEN
R420 330
R421 56
(LCD/Back Light/Light Green)
A3V
R422 68
R424 68
R426 68
D430
D431
D432
Q423
R430 3.3k
PA3:LCD_Back Light
PA[1]
PA[2]
PA[4]
PA[3]
PA[0]
IC470
R470 100k
R471 47k
R461 47k
R462 47k
R460 47K
C472 1p
C470 Z0.1
C471 Z0.1
C473 Z0.1
LCDDT[0]
LCDDT[1]


IC800
BBIC
IC650
REG
IC651
REG
IC500
IC501
AnalogSW
IC480
CN500
MONITOR SPEAKER
CN550
EAR RECEIVER
CN601
RF_GND
HEADSET_JACK
CN600_1
CN600_2
MIC (1JM)
ESD Suppressor
CN602
GND
MODE
P0_0
A[18]
DL_SW
TERMDIN
TERMDOUT
V+
VIBRATOR
CN440
[Key BL LED *8]
LCDDT[2]
PB[2]
PA[0]
PA[4]
Vib_on
TERMDOUT
TERMDIN
CK4
BATT
A3V
RESETQ
VDDBAT
VDDLO
VDDLI
VBACK
MODE
ADREF
BREF
AD4
AD3
ADBAT
PX0
PX1
PX2
PX3
PX4
PY0
PY1
PY2
PY3
PY4
P10
P11
P12
CSROQ
P00
P01
TXD
RXD
OERAQ
WRRAQ
CSRAQ
D0
D1
D2
D3
D4
D5
D6
D7
R1
R2
VDDLR
LRB
VDDA
VSSA
VDDPM
ONSW
CDT
DCDCDRV
DCDCCMR
DCDCSNS
HOP
HON
MICS
MICP
MICN
XTAL
VSSO
LOAD
SYDA
SYCL
SYEN
SYRI
PAON
DRON
RXDSG
RXDA
TXDA
BATT
ADRSSI
GND
SUPEEP
I2CLK
I2DAT
VDD1
VDD2
VDD3
VDD4
VSS1
VSS2
VSS3
VSS4
10.368MHz
X800
SYEN
DRON
RXDSG
PAON
ADRSSI
SYDA
SYCL
SYRI
RXDA
TXDA
BATT
GND
VCC A13
WR A14
SCL A15
SDA VSS
SUSPEND
BIAS
+IN
-IN
OUT2
GND
VCC
OUT1
CONT
VSS
O/I
VDD I/O
P00
P01
VSS CE
VIN
VOUT
EXT
Vin Vout
GND
CE NC
SW447
CK1
CK3
CK5
CK6
CK8
CK9
CK10
CK11
CK12
CK13
D2R6
D2R7
A[0]
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Q653
Q654
D650
D440
D441
R300
R301
R302
R303
R310
R311
R312
R429
R428
R840
R842
R758
R757
R751
R753
R754
R441
R442
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R550
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R607
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R703
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R734
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C831
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C602
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Z0.1